U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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MOLYBDENUM IN JUNE 1997

Domestic production of molybdenum in concentrate decreased 21% in June 1997 compared with that of the previous month and was 5% less than in June 1996, according to the U.S. Geological Survey. Producer molybdenum stocks in concentrate, oxide, and other product forms were 8,250 metric tons at the beginning of 1997 and 9,590 metric tons at the end of June 1997.

Included in this Mineral Industry Surveys are U.S. production, shipments, and stocks of molybdenum concentrates and materials, plus U.S. consumption by end use of molybdenum in the previous and current months. Also included are trade data for the previous 2 months. During the current month, Platt's

Metals Week U.S. monthly average price for molybdenum concentrate was \$4.960 per kilogram (\$2.250 per pound). The average price for dealer molybdenum oxide was \$10.044 per kilogram (\$4.556 per pound) and that for dealer ferromolybdenum was \$11.904 per kilogram (\$5.400 per pound).

For the week ending September 5, 1997, Metals Week U.S. average price for molybdenum concentrate was \$4.960 per kilogram (\$2.250 per pound). The average price for dealer molybdenum oxide was \$9.534 per kilogram (\$4.325 per pound) and that for ferromolybdenum was \$11.794 per kilogram (\$5.350 per pound).

 ${\bf TABLE~1} \\ {\bf U.S.~SALIENT~MOLYBDENUM~CONCENTRATE~STATISTICS~~} 1/$

(Metric tons, contained molybdenum)

			1997	
	1996 p/	May	June	Year to date
Production	56,000	5,610	4,420	31,300
Shipments: 2/				_
Domestic	16,100	1,200	1,050	7,000
Export	19,700	1,760	1,490	10,000

p/ Preliminary.

TABLE 2 U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS $1/\,$ IN $\,$ 1997

(Kilograms, contained molybdenum)

		Ferro	Ammonium	Molyb-		
	Molybdic	molyb-	and sodium	denum		
End use	oxides	denum 2/	molybdate	scrap	Other	Total
May:						
Steel:	-					
Carbon	45,500	W			3,190	48,700
High-strength low-alloy	41,600	8,590				50,100
Stainless and heat-resisting	277,000	27,100			4,700	309,000
Full alloy	242,000	171,000			2,330	416,000
Tool	91,700	6,420			2,310	100,000
Total	698,000	213,000			12,500	924,000
Cast irons (gray, malleable, and ductile iron)	1,670	56,400			763	58,900
Superalloys	74,000	W		34,500	41,700	150,000
Alloys: (other than steels, cast irons, and superalloys)	•					
Welding materials (structural and hard-facing)		W		(3/)	820	820
Other alloys 4/		W			6,150	6,150
Mill products made from metal powder 5/					195,000	195,000
Cemented carbides and related products 6/					·	
Chemical and ceramic uses:	-					
Pigments	•		651			651
Catalysts	77,300		W		14,900	92,200
Other 7/			W		2,670	2,670
Miscellaneous and unspecified uses:	-		•••		2,070	2,070
Lubricants	- 				13,100	13,100
Other	892	54,500	75,900			131,000
Grand total	852,000	324,000	76,500	34,500	287,000	1,570,000
Stocks, May 31,1997	590.000	222,000	11,400	74,400	809,000	1,710,000
June:	370,000	222,000	11,400	74,400	002,000	1,710,000
Steel:	=					
Carbon	42,800	27,700			3.190	73,700
High-strength low-alloy	37,800	9,290			3,190	47,100
	252,000				4,700	280,000
Stainless and heat-resisting	- 1	23,300				
Full alloy	201,000	178,000			2,330	381,000
Tool	95,000	6,920			2,310	104,000
Total	629,000	246,000			12,500	887,000
Cast irons (gray, malleable, and ductile iron)	1,670	54,500			763	56,900
Superalloys	. W	W		(8/)	74,500	74,500
Alloys: (other than steels, cast irons, and superalloys)	-					
Welding materials (structural and hard-facing)		W		(3/)	285	285
Other alloys 4/		W			6,670	6,670
Mill products made from metal powder 5/					134,000	134,000
Cemented carbides and related products 6/					12	12
Chemical and ceramic uses:	-					
Pigments	-		963			963
Catalysts	77,300		W		14,900	92,200
Other 7/					2,660	2,660

See footnotes at end of table.

^{1/} Data are rounded to three significant digits.

^{2/} Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 2--Continued U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS $1/\,$ IN $\,$ 1997

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum 2/	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
JuneContinued:			<u> </u>	•		
Miscellaneous and unspecified uses:						
Lubricants					11,100	11,100
Other	89,200	23,800	75,900			189,000
Total	797,000	324,000	76,900		258,000	1,460,000
Stocks, June 30,1997	576,000	205,000	11,100	45,200	813,000	1,650,000

W Withheld to avoid disclosing company proprietary data; included with "Other" of the "Miscellaneous and unspecified uses" category.

- 1/ Data are rounded to three significant digits; may not add to totals shown.
- 2/ Includes calcium molybdate.
- 3/ Included in "Welding materials (structural and hard-facing)" of the "Other" category.
- 4/ Includes magnetic and nonferrous alloys.
- 5/ Includes ingot, wire, rod, and sheet.
- 6/ Includes construction, mining, oil and gas, metal working machinery.
- 7/ Includes ground coat, glass, silicone, electroplating, and drier in paint or related uses.
- 8/ Included in "Superalloys" of the "Other" category.

 ${\bf TABLE~3} \\ {\bf U.S.~REPORTED~PRODUCTION~AND~SHIPMENTS~OF~MOLYBDENUM~PRODUCTS~1/} \\$

(Metric tons, contained molybdenum)

			1997	
	1996 p/	May	June	Year to date
Gross production	46,300	3,640	2,380	23,800
Internal consumption 2/	23,900	1,830	1,620	11,700
Gross shipments	24,100	2,280	2,010	13,400

p/ Preliminary.

TABLE 4
U. S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES (Including roasted concentrate), BY COUNTRY 1/

(Kilograms, contained molybdenum)

			1997		
Country	1996	April	May	Year to date	
Australia	60,900	1,760	5,530	36,000	
Belgium	12,400,000	1,890,000	1,670,000	7,720,000	
Brazil	20,400			339	
Canada	268,000	44,700	37,700	172,000	
Chile	6,990,000	620,000	425,000	2,740,000	
China	1,290,000	17,400		282,000	
France	5,620		60	60	
Germany	505,000	145,000		343,000	
India	58,600				
Italy	384,000			137,000	
Japan	5,140,000	600,000	574,000	3,030,000	
Korea, Republic of	10,200				
Mexico	5,500,000	350,000	463,000	1,780,000	
Netherlands	5,890,000	1,590,000	1,780,000	9,070,000	
Spain	19,900		36,800	65,600	
Sweden	473,000	59,700	99,000	378,000	
United Kingdom	6,010,000	175,000	1,130,000	2,990,000	
Other	-			9,540	
Total	45,000,000	5,500,000	6,220,000	28,800,000	

^{1/} Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

^{1/} Data are rounded to three significant digits.

^{2/} Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

 ${\bf TABLE~5} \\ {\bf U.S.~EXPORTS~OF~FERROMOLYBDENUM,~BY~COUNTRY~1/}$

(Kilograms, contained molybdenum)

			1997		
Country	1996	April	May	Year to date	
Australia			273	273	
Canada	252,000	42,000	41,600	180,000	
China				130	
Italy				3,170	
Japan	117,000	6,440	4,510	17,400	
Korea, Republic of	1,910		953	1,010	
Malaysia	37,200				
Mexico	117,000	9,820	5,130	55,600	
Singapore	53,900				
Spain	1,160				
Taiwan			1,970	5,520	
Venezuela	1,090				
Total	581,000	58,200	54,500	263,000	

^{1/} Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

 ${\bf TABLE~6} \\ {\bf U.S.~IMPORTS~FOR~CONSUMPTION~OF~MOLYBDENUM~PRODUCTS~1/}$

(Kilograms unless otherwise specified)

	1996			1997			
	January-December			January-May			
	Gross	Contained	Value (c.i.f.)	Gross	Contained	Value (c.i.f.)	
Material	weight	molybdenum	(thousands)	weight	molybdenum	(thousands)	
Ore and concentrates roasted	8,090,000	5,460,000	\$41,300,000	3,560,000	2,210,000	\$21,500,000	
Ore and concentrates other	35,600	21,100	173,000	784,000	415,000	3,010,000	
Molybdenum chemicals:							
Oxides and hydroxides	1,160,000		8,850,000	804,000		6,490,000	
Molybdates of ammonium	665,000	368,000	5,360,000	397,000	207,000	3,170,000	
Molybdates (all others)	82,500	36,400	506,000	80,700	55,800	491,000	
Molybdenum orange	1,840,000		5,710,000	707,000		2,330,000	
Mixtures of inorganic							
compounds							
Ferromolybdenum	7,870,000	4,960,000	55,100,000	2,250,000	1,420,000	15,200,000	
Molybdenum powders	125,000	110,000	3,470,000	44,300	38,100	1,470,000	
Molybdenum unwrought	91,100	84,400	2,380,000	233,000	220,000	2,810,000	
Molybdenum waste and scrap	693,000	640,000	9,720,000	238,000	233,000	3,800,000	
Molybdenum wrought							
Molybdenum wire	1,990		320,000	1,050		141,000	
Molybdenum other	3,870		1,060,000	3,200		473,000	
Total	20,700,000	11,700,000	134,000,000	9,100,000	4,810,000	60,900,000	

^{1/} Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.